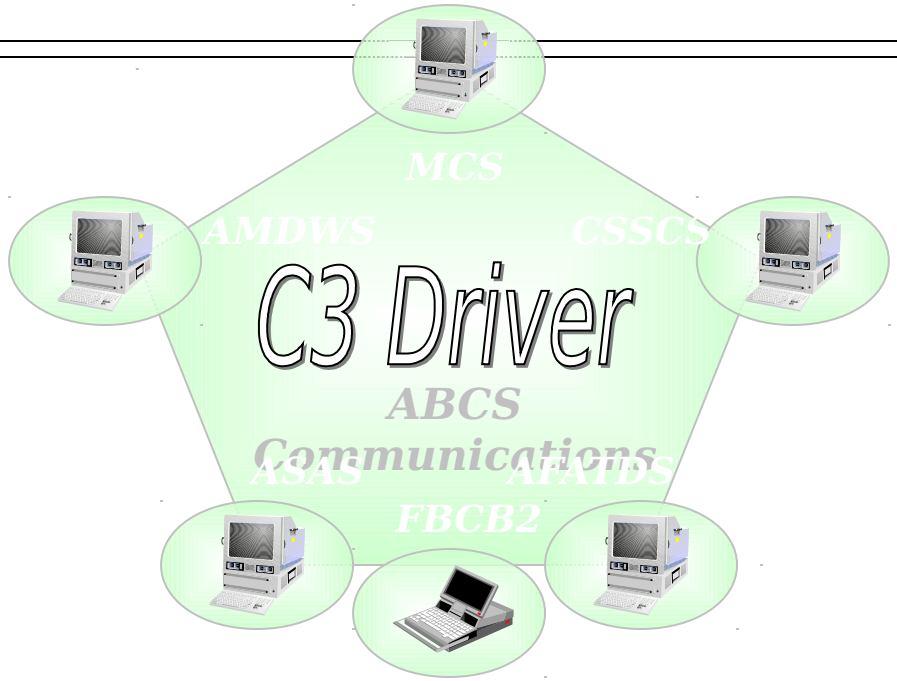


Command, Control & Communications (C3) Driver

PM ITTS STOC Industry Conference

7 - 8 August 2001

Presenters:

Name: Thomas Kelso

Organization: STRICOM Digitization Manager (Engineering Directorate)

E-Mail: thomas_m._kelso@stricom.army.mil

Background

Bottomline Up Front

DUSA(OR) Tasker:

"Can we build a standard Army C3 test driver?"

31 August 2000

Short Answer: Yes, several candidate components exist. DII COE and Army Common C4I segments are integral to a long term scalable solution.

Background

Problem Statement

- **Assess the potential of developing a standard Army C3 Driver (that keeps costs down by building on what's already out there) which can support Component, Systems, Integration, System of Systems, DT, and OT Testing (by ATEC, PMs, and Contractors)**
- **Will provide a credible, stressful, and realistic environment to test C4I systems, as well as allow its user to gain knowledge from every test event to improve the SUT**
- **Can be used to support battle staff training and as a course of action/mission planning**

Background

Recommendation

A three phase approach to develop a standard Army C3 Driver:

- **Phase I** Remainder FY01 (~9 months)
  Standard Message Generators
- **Phase II** FY02
  Prototype C3 Driver and Common ABCS Scenarios
- **Phase III** FY03 +
  Common Data Model

APPROVED

11 Jan 2001
by DUSA-OR, DISC4,
ASAALT MILDEP

Background

The C3 Driver User Community

Product Manager for Simulation Technology Integration

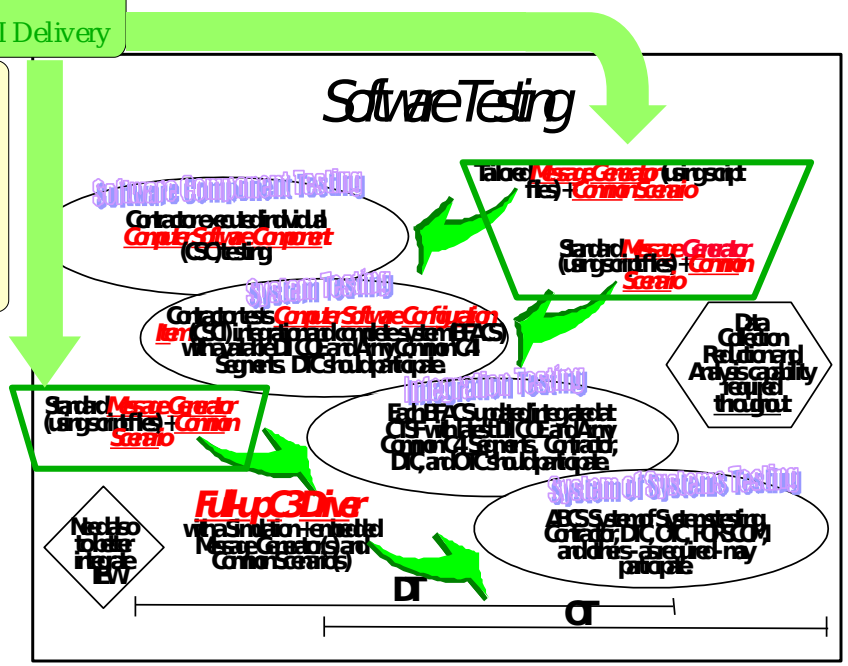
- Band 1
  - ABCS Developers
  - CTSF
  - DTC

Phase I Delivery

- Band 2

Phase II Delivery

  - Simulation Developers
  - PEO's
- Band 3
  - OTC
  - CTSF Integration NET
- Band 4
  - Schoolhouse
  - Unit
  - Self
- Band 5
  - Objective Force Task Force
  - Joint & Coalition


Software Testing
Software Component Testing
Contractor executes individual Computer Software Component (CSC) testing
Tailored Message Generator (using script files) + Common Scenario
Standard Message Generator (using script files) + Common Scenario
System Testing
Contractor tests Computer Software Configuration Item (CSCI) integrated complete system (BFACS) with validated DIC and Any Common C4I Systems DICs should participate
Data Collection Reduction and Analysis capability required throughout
Integration Testing
Each BFACS under test integrated at CTSF with validated DIC and Any Common C4I Systems, Contractor DIC, and DICs should participate
Standard Message Generator (using script files) + Common Scenario
Full up C3 Driver
with Simulation-enhanced Message Generator(s) and Common Scenario(s)
Nodes also to date integrate LBVV
System of Systems Testing
ABCS System of Systems testing, Contractor DIC, OTC, FOSCOM, and others as required may participate
DT
OT

Acquisition/Contracting

Strategy

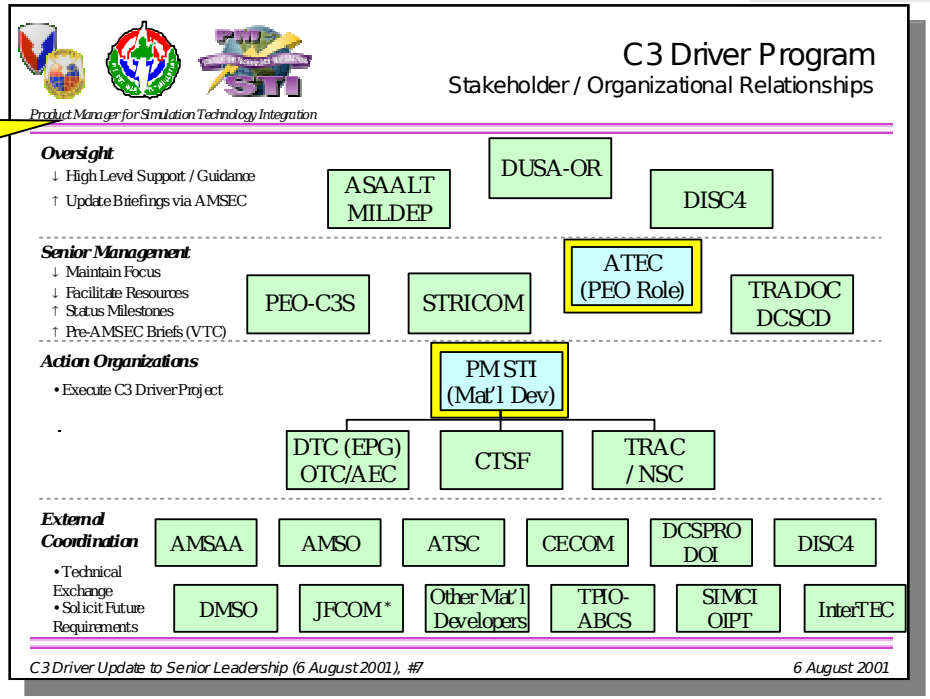
- Describe the Management Execution Proposed;
  - Phase I - ADSTII DO104 → STOC Sole Source to LMIS & NewTec
  - Phase II - Continuation of Sole Source to LMIS & NewTec
  - Phase III - Full Competition under STOC (Constructive Domain) & ??
- Expected Life of the Program: Eight Years +
- Describe the Competitive Environment: Phase I / II is Sole Source, Phase III will be Full Competition within Constructive Domain
- Identify Current Technology Vendors: LMIS, NewTec, TEI
- Identify the System Integrator: STRICOM

Issues

- DII COE Compliance, Low Overhead, Low Complexity, Baseline Upgrade to support MANY Users, C3 Driver relationship to other Programs

PROGRAM TEAM

Teaming Between STRICOM, PEO-C3S, EPG, and TRAC LVN



Identify the Program Acquisition Team

Name: **Thomas Kelso**

Organization: **US Army, STRICOM**

Duty Title: **STRICOM Digitization Manager**

Telephone: **Tom Kelso 407-384-3863**

Sharon McLaughlin 407-380-4191

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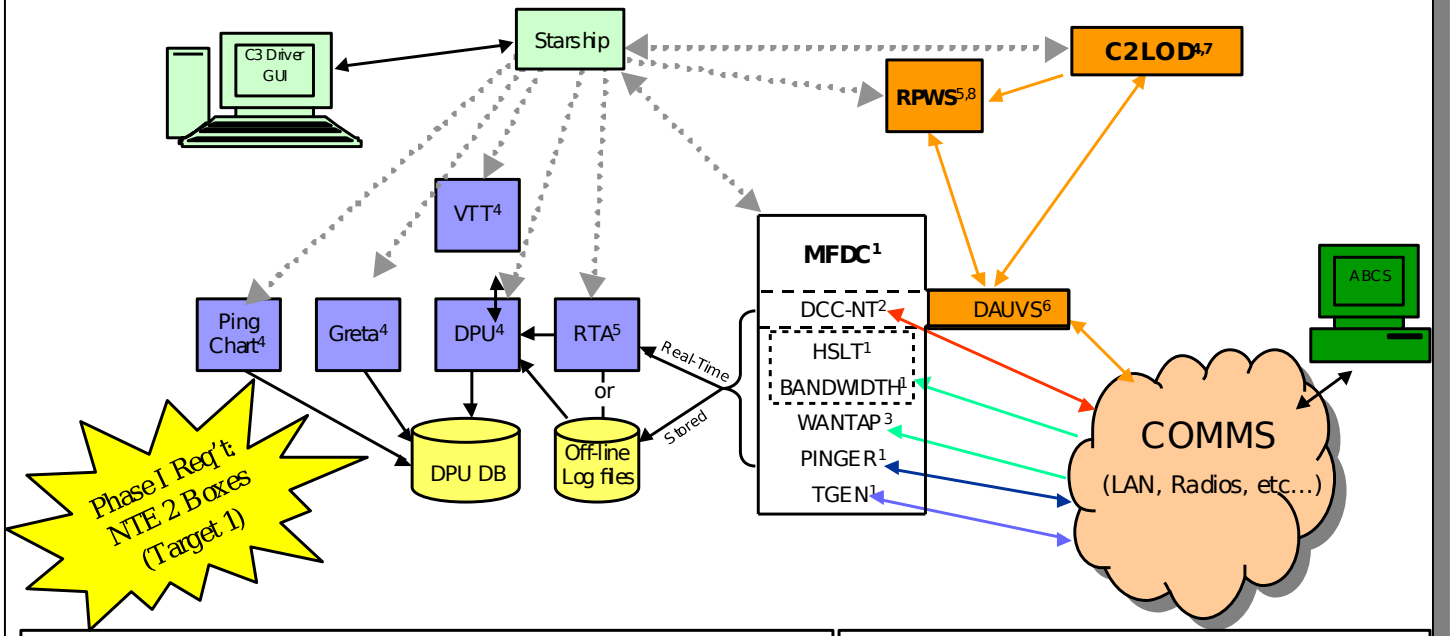
thomas_m._kelso@stricom.army.mil

C3 Driver Phase I

C3 DRIVER INTERFACE DESIGN FOR PHASE I

Product Manager for Simulation Technology Integration



1 - No changes required
2 - Under development. Start and stop through MFDC/Starship. (DCC-NT = DCM Collection Controller - NT)
3 - Complete changes to allow full Starship command and control
4 - Allow Starship to start it only
5 - Allow Starship to start and possibly stop
6 - Allow Starship to start and stop
7 - Investigate Starship use of existing API for possible implementation of monitor and control for Phase I
8 - Should be converted to Windows NT in time for Phase I

Stimulation Links for Lower TI (JVMF) and Upper TI (USMTF)
Monitoring Taps
Bandwidth Loading
Address Status
ABCS Status
C2 and H&S

LEGEND
- Unix Platform
- Windows NT Platform

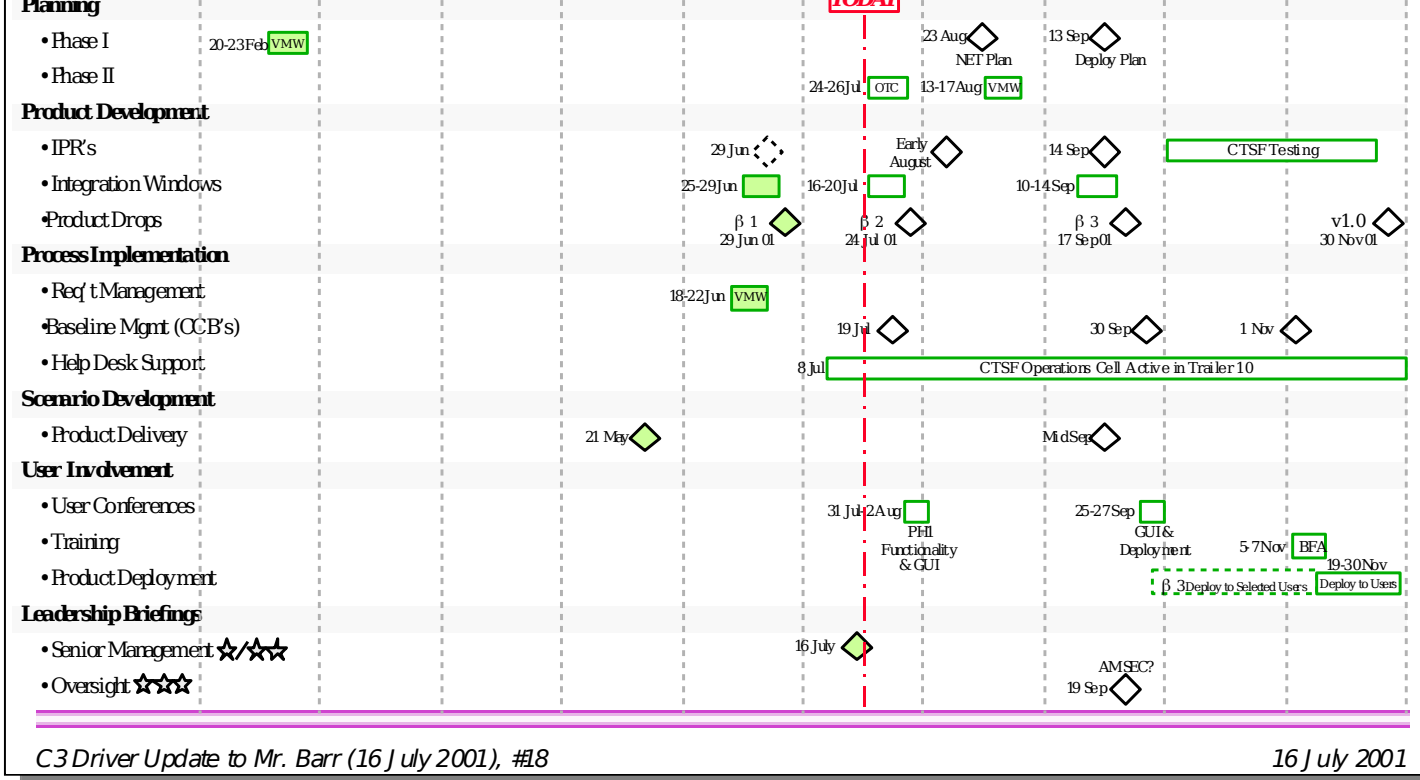
C3 Driver Update to Senior Leadership (6 August 2001), #6 *6 August 2001*

C3 Driver Phase I

C3 Driver Top Level Schedule

Phase I (Feb - Nov 01)

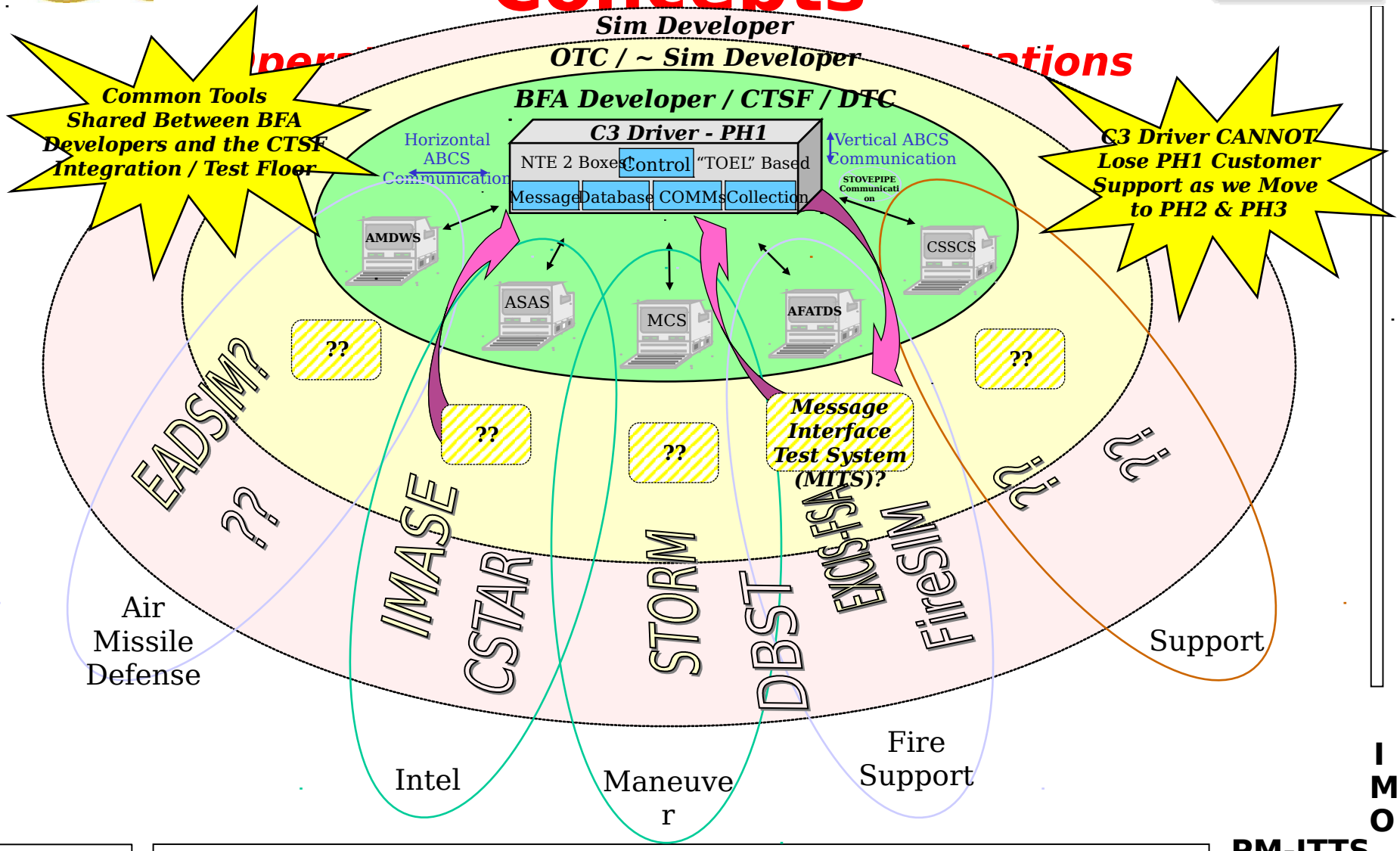
Product Manager for Simulation Technology Integration



C3 Driver Update to Mr. Barr (16 July 2001), #18

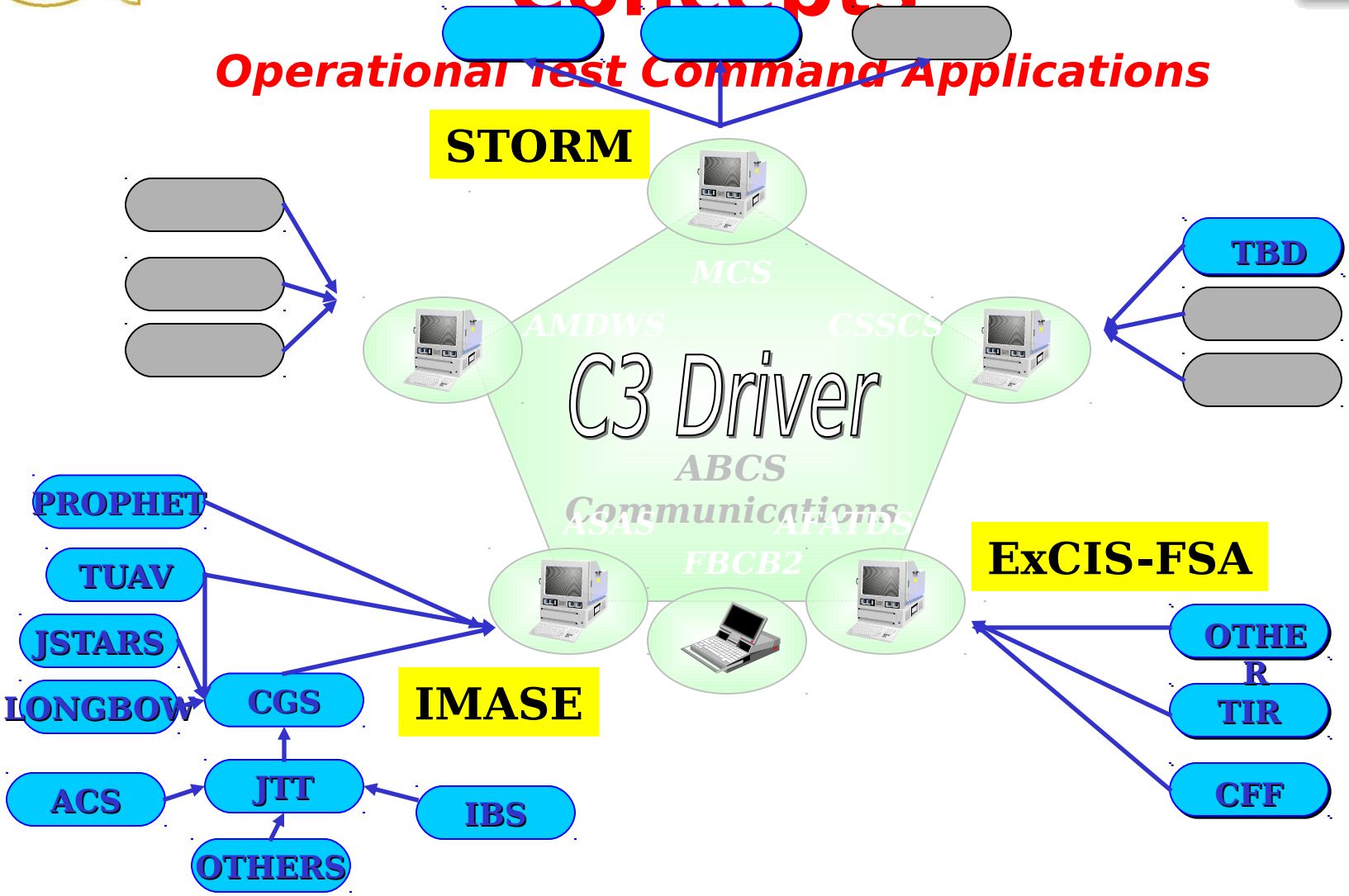
16 July 2001

C3 Driver Phase II Concepts

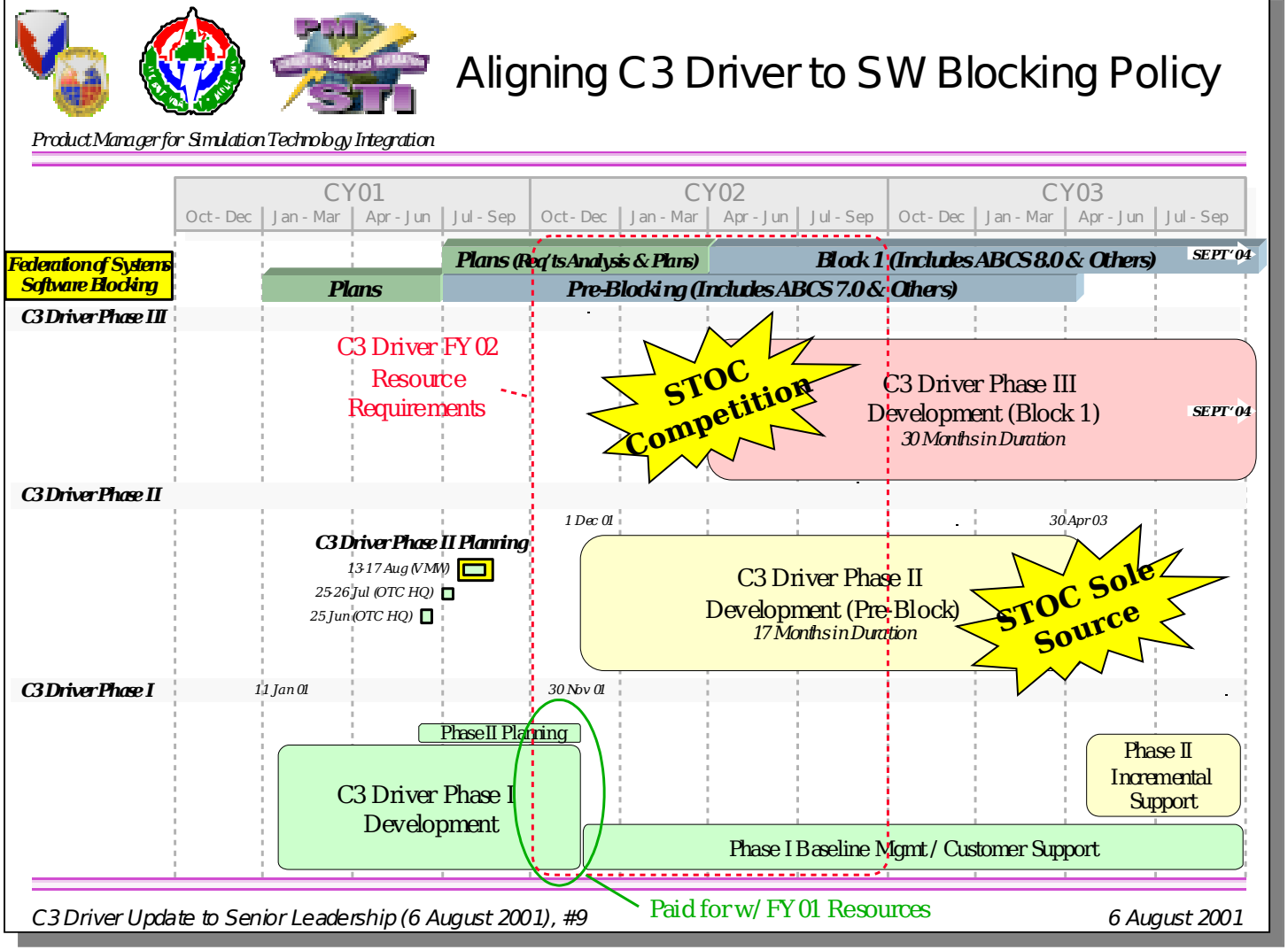


C3 Driver Phase II Concepts

Operational Test Command Applications



Program Description by Phase/Year



Critical Technical & Operational Parameters

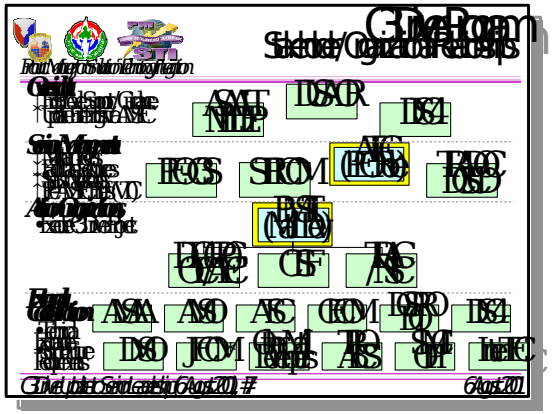
C3 Driver - Phase I at a Glance

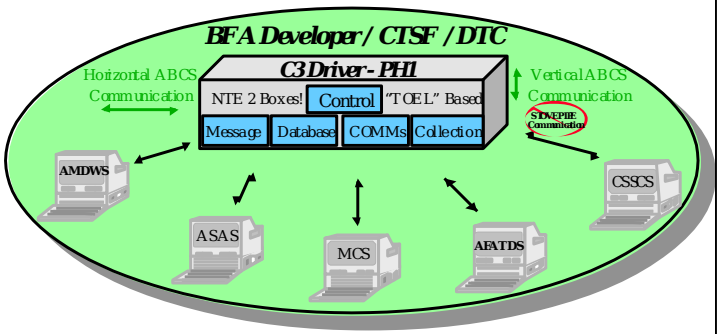
11 January 2001 - 30 November 2001

Product Manager for Simulation Technology Integration

- Open Architecture
- Standards Based
- Scaleable Solutions

- Phase I Requirements
  - DII COE Compliant
  - Aligned to SIMCI Approach to Interoperability
  - Supports ABCS 7.0 Integration & Test
  - Used by ABCS Developers, CTSF and DTC
  - Threshold is 2 Boxes, Objective is 1 Box
- Functionality
  - Stimulate JCDB
  - Message Conformance
    - » All Cases & Conditions properly to Standard
  - Blue / Red SA (Ground & Air)
  - All ABCS 7.0 JVMF Messages (starting point is ABCS 6.2.1)
  - All USMTF Messages to support the Standard Baseline Test Threads (ABCS & Joint)
  - Do XML
  - Must Stress Tactical Comms Networks





SUMMARY

- C3 Driver is a New Start this Calendar Year
  - Approved 11 Jan 2001 by Mr. Hollis, LTG Cuviello, LTG Kern
  - Phase I is leveraging existing products currently at use at CTSF
  - Phase II Requirements to be Defined 13-17 August 2001
- C3 Driver Executed by STRICOM Digitization Manager
  - Currently Aligned with PM Simulation Technology Integration
  - Could Easily be Transitioned to PM ITTS or PM WARSIM
- C3 Driver Program to be Aligned with Software Blocking
  - C4ISR is Pacing Item for each Block (aligned with ABCS 7.0, 8.0, etc)
  - Program will evolve to 36 Month Development Windows Leading to Army Transformation